

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

0069228

06-AMCP-0165

MAR 30 2006

Ms. Jane Hedges, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
3100 Port of Benton Boulevard
Richland, Washington 99352

RECEIVED
APR 05 2006

EDMC

Dear Ms. Hedges:

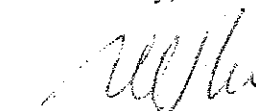
COMPLETION OF HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER (TRI-PARTY AGREEMENT) INTERIM MILESTONES M-020-39: SUBMIT 216-S-10 POND AND DITCH CLOSURE/POSTCLOSURE PLAN AND M-015-39C: SUBMIT FEASIBILITY STUDY AND PROPOSED PLAN FOR THE 200-CS-1 CHEMICAL SEWER GROUP OPERABLE UNIT

The purpose of this letter is to submit the attached "Hanford Facility Dangerous Waste Closure/Postclosure Plan for the 216-B-63 Trench," DOE/RL-2006-11, Draft A; "Hanford Facility Dangerous Waste Closure/Postclosure Plan for the 216-S-10 Pond and Ditch," DOE/RL-2006-12, Draft A; "The Feasibility Study," Draft A, DOE/RL-2005-63; and "Proposed Plan," Draft A, DOE/RL-2005-64 for the 200-CS-1 Operable Unit for regulatory review by the State of Washington Department of Ecology (Ecology).

These document submittals complete Tri-Party Agreement interim milestones M-015-39C and M-020-39 and are primary documents in accordance with Section 9.0, "Documentation and Records," of the Tri-Party Agreement Action Plan. Ecology has 45 days following receipt of the documents to either approve or return comments to the U.S. Department of Energy, Richland Operations Office. In addition, attached are the two corresponding State Environmental Policy Act checklists for each closure plan listed above as well as the "Post-Closure RCRA Groundwater Monitoring Plan for the 216-S-10 Pond & Ditch," PNNL-15731, which is a supporting document to the related Postclosure Plan for the 216-S-10 Pond and Ditch.

If you have any questions, please contact me, or your staff may contact Matt McCormick, Assistant Manager for the Central Plateau, on (509) 373-9971.

Sincerely,


Keith A. Klein
Manager

AMCP:BLF

Attachments

cc: See Page 2

Ms. Jane Hedges
06-AMCP-0165

-2-

MAR 30 2006

cc w/attachs:

J. Price, Ecology
J. Vanni, Ecology
Administrative Record, H6-08
Environmental Portal

cc w/o attachs:

B. A. Austin, FHI
D. Bartus, EPA
C. E. Cameron, EPA
L. J. Cusack, Ecology
S. Harris, CTUIR
M. J. Hickey, FHI
R. Jim, YN
M. B. Lackey, FHI
T. Martin, HAB
R. D. Morrison, FHI
K. Niles, Oregon Office of Energy
R. E. Piippo, FHI
P. Sobotta, NPT
M. Todd-Robertson, FHI
J. A. Winterhalder, FHI

**STATE ENVIRONMENTAL POLICY ACT
ENVIRONMENTAL CHECKLIST**

FOR THE

**HANFORD FACILITY,
216-B-63 TRENCH CLOSURE**

REVISION 0

March 2006

**WASHINGTON ADMINISTRATIVE CODE
ENVIRONMENTAL CHECKLIST
[WAC 197-11-960]**

A. BACKGROUND

1. Name of proposed project, if applicable:

This *State Environmental Policy Act* (SEPA) of 1971 Environmental Checklist is being submitted for closure of the Hanford Facility, 216-B-63 Trench. This area will be closed with respect to dangerous waste contamination that resulted from treatment operations as a *Resource Conservation and Recovery Act* (RCRA) of 1976 treatment, storage, and/or disposal (TSD) unit.

2. Name of applicants:

U.S. Department of Energy, Richland Operations Office (DOE-RL).

3. Address and phone number of applicants and contact persons:

U.S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

Contact:

Keith A. Klein, Manager
Richland Operations Office
(509) 376-7395

4. Date checklist prepared:

March 2006.

5. Agency requesting the checklist:

Washington State Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

6. Proposed timing or schedule: (including phasing, if applicable):

This SEPA Environmental Checklist is being submitted concurrently with a closure plan prepared in accordance with Washington Administrative Code (WAC) 173-303 Dangerous Waste Regulations. The closure plan will be submitted to the Washington State Department of Ecology by March 2006.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No. The 216-B-63 Trench closure plan is being submitted in conjunction with 216-S-10 Pond and Ditch closure plan and the 216-A-29 Ditch closure plan. The 216-S-10 Pond and Ditch closure plan submittal is required by March 31, 2006 in accordance with Tri-Party Agreement (Ecology et al) Milestone

M-20-39. The 216-A-29 Ditch, 216-B-63 Trench, and the 216-S-10 Pond and Ditch TSD units are all within the 200-CS-1 source Operable Unit.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

The original closure plan for the 216-B-63 Trench was submitted to the State of Washington Department of Ecology (Ecology) pursuant to Tri-Party Agreement milestone M-20-36 in April 1995. A revised closure plan is being prepared.

This SEPA Environmental Checklist is being submitted to Ecology to address the 216-B-63 Trench proposed closure activities. Environmental information that has been prepared directly related to this proposal is contained in DOE/RL-2004-017, *Remedial Investigation Report for the 200-CS-1 Chemical Sewer Group Operable Unit* and groundwater data contained in the Hanford Environmental Information System (HEIS). Because the closure plan proposes clean closure for soils and groundwater, no environmental information will be prepared directly related to this proposal. Any other information related to 216-S-10 Pond and Ditch after closure of the TSD unit will be performed in conjunction with Tri-Party Agreement past practice activities for the 200-CS-1 source operable unit and 200-BP-5 groundwater operable unit.

The development of the revised closure plan has been coordinated with the 200-CS-1 source operable unit in accordance with Tri-Party Agreement milestone M-15-39C. This coordinated approach was established in June 2002 following the completion of negotiations between the Tri-Parties on the modifications to 200 Area waste site cleanup milestones through Tri-Party Agreement change requests M-13-02-01, M-15-02-01, M-16-02-01, and M-20-02-01.

The proposed closure strategy for the 216-B-63 Trench soils, structures, and groundwater is clean closure. This strategy is based upon analytical data summarized in the *Remedial Investigation Report for the 200-CS-1 Chemical Sewer Group Operable Unit* (DOE/RL-2004-17) and groundwater data contained in the Hanford Environmental Information System (HEIS).

General information concerning the Hanford Facility environment can be found in the *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 17, September 2005. This document is updated annually by Pacific Northwest National Laboratory (PNNL), and provides current information concerning climate and meteorology, ecology, history and archeology, socioeconomic, land use and noise levels, and geology and hydrology. These baseline data for the Hanford Site and past activities are useful for evaluating proposed activities and their potential environmental impacts.

9. Do you know whether applications are pending for government approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No other applications are pending. However, see response to A8 regarding physical activities necessary to complete remediation of non-TSD unit constituents.

10. List any government approvals or permits that will be needed for your proposal, if known.

DOE-RL forwards the aforementioned 216-B-63 Trench closure plan to Ecology for approval.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

The proposed closure strategy for the 216-B-63 Trench soils, structures, and groundwater is clean closure.

The 216-B-63 Trench is located in the 200 East Area of the Hanford Facility. The 216-B-63 Trench was constructed before 1970 as a percolation trench to receive emergency cooling water and chemical sewer waste from B Plant (221-B Canyon Building). The 216-B-63 Trench began waste management operation in March of 1970 by receiving the B Plant chemical sewer effluent. The 216-B-63 Trench received waste between March 1970 and February 1992. The 216-B-63 Trench received effluent from many buildings at the B Plant Complex. The trench terminated south of the 218-E-12B Burial Ground. It was designed to receive diverted contaminated cooling water in order to prevent the diverted water from reaching the 216-B-3 Pond. In February 1992, the B Plant chemical sewer effluent was combined with the B Plant cooling water effluent and discharged into the 216-B-3 Pond. The trench was taken out of service in 1992.

Current data for soils show that the three TSD unit constituents [sodium, sulfate, nitrate (as N)] either meet the clean closure standard using WAC 173-340-740(3) values or the constituent is not regulated.

For groundwater, the RCRA indicator parameters are specific conductance, pH, total organic carbon, and total organic halides. Groundwater quality parameters are chloride, iron (filtered), manganese (filtered), phenols, sodium (filtered), and sulfate. The 216-B-63 Trench has been in an interim status indicator parameter evaluation (detection-level) program since 1988. There are no RCRA indicator parameters exceedances nor are there significant detections that could be attributed to this trench.

No physical activities are required for closure. After closure, appearance of the land will be consistent with land use determinations of the Hanford Facility.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The 216-B-63 Trench is located in the 200 East Area of the Hanford Facility. The 216-B-63 Trench was constructed before 1970 as a percolation trench to receive emergency cooling water and chemical sewer waste from B Plant (221-B Canyon Building). The ditch was an open, unlined, man-made earthen trench that was closed at one end (did not convey effluent to another facility). The trench was approximately 427 m (1,400 ft) long, 1.2 m (4 ft) wide, and averaged 3 m (10 ft) deep. The side slope was 1.5:1. The first 3.1 m (10 ft) of the trench contained a 5.1 cm (2-in) rockfill. A 40.6 m (16-in.) inlet pipe approximately 1.5 m (5 ft) long entered the trench 1 m (3 ft) below grade. In addition to the trench itself, the TSD unit also includes the 15-inch pipe extending to the 207-B basin.

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR
AGENCY USE ONLY

B. ENVIRONMENTAL ELEMENTS

1. Earth

- a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other_____.

Flat.

- b. What is the steepest slope on the site (approximate percent slope)?

The approximate slope of the land is less than 2 percent.

- c. What general types of soils are found on the site? (for example, clay, sandy gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Soil types consist mainly of eolian and fluvial sands and gravel. More detailed information concerning specific soil classifications can be found in the *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 17, September 2005. Farming is not permitted on the Hanford Facility.

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No.

- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

No filling or grading is required.

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

No.

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Not applicable. No construction is proposed as part of this project.

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR
AGENCY USE ONLY

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

None.

2. Air

- a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities, if known.

None. No physical activities are required to support closure of the 216-B-63 Trench.

- b. Are there any off-site sources of emissions or odors that may affect your proposal? If so, generally describe.

No.

- c. Proposed measures to reduce or control emissions or other impacts to the air, if any?

None since no emissions are anticipated for the closure of the 216-B-63 Trench.

3. Water

a. Surface

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

No. The 216-B-63 Trench is over 7 kilometers from the Columbia River.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

The work would not require any activity in or near the described waters and drainage.

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR
AGENCY USE ONLY

- 1 3) Estimate the amount of fill and dredge material that would
2 be placed in or removed from surface water or wetlands and
3 indicate the area of the site that would be affected. Indicate
4 the source of fill material.

5 There would be no dredging or filling from or to surface water
6 or wetlands.
7

- 8 4) Will the proposal require surface water withdrawals or
9 diversions? Give general description, purpose, and
10 approximate quantities if known.

11 No surface water withdrawal or diversion would be required.
12

- 13 5) Does the proposal lie within a 100-year floodplain? If so,
14 note location on the site plan.

15 The 216-B-63 Trench is not within the 100-year or 500-year
16 floodplain [*Hanford Site National Environmental Policy Act*
17 (*NEPA*) *Characterization*, PNL-6415, Revision 17,
18 September 2005].
19

- 20 6) Does the proposal involve any discharges of waste materials
21 to surface waters? If so, describe the type of waste and
22 anticipated volume of discharge.

23 No.
24

25 b. Ground

- 26 1) Will ground water be withdrawn, or will water be
27 discharged to ground water? Give general description,
28 purpose, and approximate quantities if known.

29 No.
30

- 31 2) Describe waste material that will be discharged into the
32 ground from septic tanks or other sources, if any (for
33 example: Domestic sewage; industrial, containing the
34 following chemicals...; agricultural; etc.). Describe the
35 general size of the system, the number of such systems, the
36 number of houses to be served (if applicable), or the number
37 of animals or humans the system(s) are expected to serve.

38 None.
39

TO BE COMPLETED BY APPLICANT

**EVALUATIONS FOR
AGENCY USE ONLY**

c. Water Run-off (including storm water)

- 1) Describe the source of run-off (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

The Hanford Facility receives only 15.2 to 17.8 centimeters of annual precipitation. Precipitation runs off the existing buildings and seeps into the soil on and near the buildings. This precipitation does not reach the groundwater or surface waters.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

No waste materials can enter ground or surface waters as a result of closure.

d. Proposed measures to reduce or control surface, ground, and run-off water impacts, if any:

No measures are proposed to reduce or control surface, ground, and run-off impacts.

4. Plants

a. Check or circle the types of vegetation found on the site.

- ☐ deciduous tree: alder, maple, aspen, other
☐ evergreen tree: fir, cedar, pine, other
☒ shrubs
☒ grass
☐ pasture
☐ crop or grain
☐ wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
☐ water plants: water lily, eelgrass, milfoil, other
☐ other types of vegetation

The most common vegetation community in the 200 East Area is sagebrush/cheatgrass or Sandberg's bluegrass. Native vegetation resides in the immediate vicinity of the 216-B-63 Trench.

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR
AGENCY USE ONLY

- 1 **b. What kind and amount of vegetation will be removed or**
2 **altered?**

3 No vegetation would be removed or altered during 216-B-63 Trench
4 closure activities.

- 5
6 **c. List threatened or endangered species known to be on or near**
7 **the site.**

8 No known threatened or endangered species are known to be on or
9 near the 216-B-63 Trench. Additional information on species can be
10 found in *Hanford Site National Environmental Policy Act (NEPA)*
11 *Characterization*, PNL-6415 (Revision 17, September 2005).

- 12
13 **d. Proposed landscaping, use of native plants, or other measures to**
14 **preserve or enhance vegetation on the site, if any:**

15 None.

16
17 **5. Animals**

- 18 **a. Indicate (by underlining) any birds and animals which have**
19 **been observed on or near the site or are known to be on or near**
20 **the site:**

21 birds: Raptors (burrowing owls, ferruginous, redtail, and Swainson's
22 hawks) eagles, songbirds,
23 animals: deer, elk, coyotes, rabbits, rodents.

24
25 Additional information on animals can be found in *Hanford Site*
26 *National Environmental Policy Act (NEPA) Characterization*,
27 PNL-6415 (Revision 17, September 2005).

- 28
29
30 **b. List any threatened or endangered species known to be on or**
31 **near the site.**

32 One federal and state listed threatened or endangered species has
33 been identified on the 1,517 square kilometer Hanford Site along the
34 Columbia River (the bald eagle) and three in the Columbia River
35 (steelhead, spring-run Chinook salmon, and bull trout). In addition,
36 the state listed white pelican, sandhill crane, and ferruginous hawk
37 also occur on or migrate through the Hanford Site.
38

TO BE COMPLETED BY APPLICANT

**EVALUATIONS FOR
AGENCY USE ONLY**

c. Is the site part of a migration route? If so, explain.

The Hanford Site is a part of the broad Pacific Flyway. However, the 216-B-63 Trench location is not known as a haven for migratory birds.

d. Proposed measures to preserve or enhance wildlife, if any:

This project contains no specific measures to preserve or enhance wildlife.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

None.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

None.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.

No.

1) Describe special emergency services that might be required.

No special emergency services are known to be required.

2) Proposed measures to reduce or control environmental health hazards, if any:

None.

TO BE COMPLETED BY APPLICANT

**EVALUATIONS FOR
AGENCY USE ONLY**

b. Noise

1) What type of noise exists in the area which may affect your project (for example: traffic, equipment, operation, other)?

None is anticipated.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)?
Indicate what hours noise would come from the site.

None is anticipated.

3) Proposed measures to reduce or control noise impacts, if any:

None.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

The 216-B-63 Trench site is not in use. Adjacent properties are industrial/research.

b. Has the site been used for agriculture? If so, describe.

No portion of the 200 East Area has been used for agricultural purposes since 1943.

c. Describe any structures on the site.

There are no structures at the 216-B-63 Trench site.

d. Will any structures be demolished? If so, what?

Not applicable. There are no structures on the site (refer to Section B.8.c).

e. What is the current zoning classification of the site?

Does not apply. The site is located on Federal lands and as such is not subject to the Growth Management Act (State of Washington land use authority). However, for completeness, the Hanford Site is

TO BE COMPLETED BY APPLICANT

**EVALUATIONS FOR
AGENCY USE ONLY**

currently included in the Benton County Comprehensive Plan (June 22, 1998) as the undesignated "Hanford Sub-Area".

f. What is the current comprehensive plan designation of the site?

The Federal land management decision process has determined through NEPA [*Hanford Comprehensive Land-Use Plan Environmental Impact Statement Record of Decision* (64 FR 61615, November 12, 1999)] that the 200 East Area geographic area, which includes the 216-B-63 Trench, is designated Industrial-Exclusive.

g. If applicable, what is the current shoreline master program designation of the site?

Does not apply.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No.

i. Approximately how many people would reside or work in the completed project?

Not applicable.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Does not apply.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Does not apply (refer to Section B.8.f.).

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

TO BE COMPLETED BY APPLICANT

**EVALUATIONS FOR
AGENCY USE ONLY**

- b. Approximately how many units, if any, would be eliminated?
Indicate whether high, middle, or low-income housing.

None.

- c. Proposed measures to reduce or control housing impacts, if any:

Does not apply.

10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

No new structures are being proposed.

- b. What views in the immediate vicinity would be altered or obstructed?

None.

- c. Proposed measures to reduce or control aesthetic impacts, if any:

None.

11. Light and Glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None.

- b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

- c. What existing off-site sources of light or glare may affect your proposal?

None.

TO BE COMPLETED BY APPLICANT

**EVALUATIONS FOR
AGENCY USE ONLY**

- d. Proposed measures to reduce or control light and glare impacts, if any:

None.

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?

None.

- b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any?

None.

13. Historic and Cultural Preservation

- a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No places or objects listed on, or proposed for, national, state, or local preservation registers are known to be on or next to the 216-B-63 Trench.

- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

There are no known archaeological, historical, or Native American religious sites on or near the 216-B-63 Trench.

- c. Proposed measures to reduce or control impacts, if any:

None.

TO BE COMPLETED BY APPLICANT

**EVALUATIONS FOR
AGENCY USE ONLY**

14. Transportation

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

Does not apply.

- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No. The distance to the nearest public transit stop is approximately 50 kilometers, located at Washington State University Tri-Cities.

- c. How many parking spaces would the completed project have? How many would the project eliminate?

Not applicable.

- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

No.

- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

No additional vehicular traffic will be required.

- g. Proposed measures to reduce or control transportation impacts, if any:

None.

TO BE COMPLETED BY APPLICANT

**EVALUATIONS FOR
AGENCY USE ONLY**

15. Public Services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No.

- b. Proposed measures to reduce or control direct impacts on public services, if any:

Does not apply.

16. Utilities

- a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other:

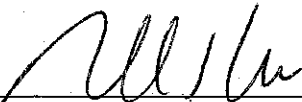
No utilities currently are available at the 216-B-63 Trench.

- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

No utilities are proposed for the closure of the 216-B-63 Trench.

SIGNATURES

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.



3/30/06

Date

Keith A. Klein, Manager
U.S. Department of Energy
Richland Operations Office

**STATE ENVIRONMENTAL POLICY ACT
ENVIRONMENTAL CHECKLIST**

FOR THE

**HANFORD FACILITY,
216-S-10 POND AND DITCH CLOSURE**

REVISION 0

March 2006

**WASHINGTON ADMINISTRATIVE CODE
ENVIRONMENTAL CHECKLIST
[WAC 197-11-960]**

A. BACKGROUND

1. Name of proposed project, if applicable:

This *State Environmental Policy Act (SEPA) of 1971* Environmental Checklist is being submitted for closure of the Hanford Facility, 216-S-10 Pond and Ditch. This area will be closed with respect to dangerous waste contamination that resulted from treatment operations as a *Resource Conservation and Recovery Act (RCRA) of 1976* treatment, storage, and/or disposal (TSD) unit.

2. Name of applicants:

U.S. Department of Energy, Richland Operations Office (DOE-RL).

3. Address and phone number of applicants and contact persons:

U.S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

Contact:

Keith A. Klein, Manager
Richland Operations Office
(509) 376-7395

4. Date checklist prepared:

March 2006.

5. Agency requesting the checklist:

Washington State Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

6. Proposed timing or schedule: (including phasing, if applicable):

This SEPA Environmental Checklist is being submitted concurrently with a closure plan prepared in accordance with Washington Administrative Code (WAC) 173-303 Dangerous Waste Regulations. The closure plan will be submitted to the Washington State Department of Ecology by March 2006.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No. The closure plan is being submitted in accordance with Tri-Party Agreement (Ecology et al) Milestone M-20-39 that requires submittal of a closure plan for the 216-S-10 Pond and Ditch RCRA TSD unit by March 31, 2006.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

This SEPA Environmental Checklist is being submitted to Ecology to address the 216-S-10 Pond and Ditch closure activities. Environmental information that has been prepared directly related to this proposal is contained in DOE/RL-2004-017, *Remedial Investigation Report for the 200-CS-1 Chemical Sewer Group Operable Unit* and groundwater data contained in the Hanford Environmental Information System (HEIS). Environmental information that will be prepared directly related to this proposal will be contained in the post closure groundwater monitoring plan. Any other information related to 216-S-10 Pond and Ditch after closure of the TSD unit will be performed in conjunction with Tri-Party Agreement past practice activities for the 200-CS-1 source operable unit and 200-UP-1 groundwater operable unit.

General information concerning the Hanford Facility environment can be found in the *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 17, September 2005. This document is updated annually by Pacific Northwest National Laboratory (PNNL), and provides current information concerning climate and meteorology, ecology, history and archeology, socioeconomic, land use and noise levels, and geology and hydrology. These baseline data for the Hanford Site and past activities are useful for evaluating proposed activities and their potential environmental impacts.

9. Do you know whether applications are pending for government approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No other applications are pending. However, see response to A8 regarding physical activities necessary to complete remediation of non-TSD unit constituents.

10. List any government approvals or permits that will be needed for your proposal, if known.

DOE-RL forwards the aforementioned 216-S-10 Pond and Ditch closure plan, and the postclosure groundwater monitoring plan to Ecology for approval.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

The DOE-RL proposes clean closure for the 216-S-10 Pond and Ditch soils; groundwater will require post-closure monitoring.

The south end of the 216-S-10 Ditch remained in use until 1984, when two-thirds of the ditch was backfilled and stabilized. In 1984, concurrent with the 216-S-10 Ditch, the pond was stabilized. The north end of the 216-S-10 Ditch last received discharges during 1991 and the supplying pipeline was plugged with concrete near the outfall in July 1994. The concrete plug was poured in manhole #2 to achieve positive assurance of isolation. To preclude any further discharges to the unit and in support of TSD unit closure, the 216-S-10 Pond and Ditch were physically isolated from receipt of effluent in 1994.

Existing data show all eight of the TSD unit constituents (sodium, potassium, nitrite, phosphate, chloride, fluoride, chromium (total) and chromium VI) either meet the clean closure standard or the constituent is not regulated. The data shows the 216-S-10 Pond and Ditch soils qualify for clean closure because concentrations of TSD unit constituents of concern have been shown by remedial investigation sampling to be below the action level for soil prescribed by WAC 173-303-610(2)(b)(i).

The 216-S-10 Pond and Ditch groundwater closure approach is post closure monitoring under a final status detection monitoring program. Groundwater monitoring has shown an elevated level of chromium in an upgradient well. Clean closure of the groundwater is not possible, due to chromium contamination. A post closure final status detection monitoring program is required for TSD unit groundwater monitoring. Post closure groundwater monitoring will be performed in order to meet the post closure plan requirements of WAC 173-303-610(8)(b)(i) and the WAC 173-303-645 requirements of WAC 173-303-610(8)(b)(ii).

No physical activities are required for soils clean closure. After closure, appearance of the land will be consistent with land use determinations of the Hanford Facility. Groundwater monitoring activities will be coordinated with monitoring requirements for the 200-UP-1 groundwater operable unit.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The 216-S-10 Pond and Ditch are located in the Hanford 200 West Area southwest of the REDOX complex. The pond and ditch begin approximately 445 m, (1,460 ft) southwest of the 202-S Building and 133 ft south of 10th street and end approximately 1330 m (4,350 ft) southwest of the 202-S Building.

The 216-S-10 Ditch was an uncovered, unlined man-made ditch that received wastewater from the REDOX Facility. The ditch originated outside the 200 West Area perimeter fence and was estimated to be 686 m (2250 ft) long, 1.8 m (6 ft) wide and averaged 1.8 m (6 ft) deep. The 216-S-10 Pond was an irregular-shaped, man-made pond that covered approximately 20,300 m² (5 acres) and included four finger-leach trenches. The pond was approximately 2.4 m (8 ft) at its deepest point. The 216-S-10 Ditch fed the pond. Both the pond and ditch were designed to disposal of liquids through percolation into the soil columns.

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR
AGENCY USE ONLY

B. ENVIRONMENTAL ELEMENTS

1. Earth

- a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other _____.

Flat.

- b. What is the steepest slope on the site (approximate percent slope)?

The approximate slope of the land is less than 2 percent.

- c. What general types of soils are found on the site? (for example, clay, sandy gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Soil types consist mainly of eolian and fluvial sands and gravel. More detailed information concerning specific soil classifications can be found in the *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 17, September 2005. Farming is not permitted on the Hanford Facility.

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No.

- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

No filling or grading is required.

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

No.

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Not applicable. No construction is proposed as part of this project.

TO BE COMPLETED BY APPLICANT

**EVALUATIONS FOR
AGENCY USE ONLY**

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

None.

2. Air

- a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities, if known.

Routine postclosure monitoring activities would generate dust.

- b. Are there any off-site sources of emissions or odors that may affect your proposal? If so, generally describe.

No.

- c. Proposed measures to reduce or control emissions or other impacts to the air, if any?

None since no emissions are anticipated for the closure of the 216-S-10 Pond and Ditch.

3. Water

a. Surface

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

No. The 216-S-10 Pond and Ditch are over 7 kilometers from the Columbia River.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

The work would not require any activity in or near the described waters and drainage.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR
AGENCY USE ONLY

1 indicate the area of the site that would be affected. Indicate
2 the source of fill material.

3 There would be no dredging or filling from or to surface water
4 or wetlands.
5

- 6 4) Will the proposal require surface water withdrawals or
7 diversions? Give general description, purpose, and
8 approximate quantities if known.

9 No surface water withdrawal or diversion would be required.
10

- 11 5) Does the proposal lie within a 100-year floodplain? If so,
12 note location on the site plan.

13 The 216-S-10 Pond and Ditch are not within the 100-year or
14 500-year floodplain [*Hanford Site National Environmental*
15 *Policy Act (NEPA) Characterization*, PNL-6415, Revision 17,
16 September 2005].
17

- 18 6) Does the proposal involve any discharges of waste materials
19 to surface waters? If so, describe the type of waste and
20 anticipated volume of discharge.

21 No.
22

23 b. Ground

- 24 1) Will ground water be withdrawn, or will water be
25 discharged to ground water? Give general description,
26 purpose, and approximate quantities if known.

27 Besides the usual groundwater monitoring under post closure monitoring, no groundwater
28 will be withdrawn and no water will be discharged during closure.
29

- 30 2) Describe waste material that will be discharged into the
31 ground from septic tanks or other sources, if any (for
32 example: Domestic sewage; industrial, containing the
33 following chemicals...; agricultural; etc.). Describe the
34 general size of the system, the number of such systems, the
35 number of houses to be served (if applicable), or the number
36 of animals or humans the system(s) are expected to serve.

37 None.
38

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR
AGENCY USE ONLY

c. Water Run-off (including storm water)

- 1) Describe the source of run-off (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

The Hanford Facility receives only 15.2 to 17.8 centimeters of annual precipitation. Precipitation runs off the existing buildings and seeps into the soil on and near the buildings. This precipitation does not reach the groundwater or surface waters.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

No waste materials can enter ground or surface waters as a result of closure.

d. Proposed measures to reduce or control surface, ground, and run-off water impacts, if any:

No measures are proposed to reduce or control surface, ground, and run-off impacts.

4. Plants

a. Check or circle the types of vegetation found on the site.

- | | |
|-------------------------------------|--------------------------------------------------------------------|
| <input type="checkbox"/> | deciduous tree: alder, maple, aspen, other |
| <input type="checkbox"/> | evergreen tree: fir, cedar, pine, other |
| <input checked="" type="checkbox"/> | shrubs |
| <input checked="" type="checkbox"/> | grass |
| <input type="checkbox"/> | pasture |
| <input type="checkbox"/> | crop or grain |
| <input type="checkbox"/> | wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other |
| <input type="checkbox"/> | water plants: water lily, eelgrass, milfoil, other |
| <input type="checkbox"/> | other types of vegetation |

The most common vegetation community in the 200 West Area is sagebrush/cheatgrass or Sandberg's bluegrass. Native vegetation resides in the immediate vicinity of the 216-S-10 Pond and Ditch.

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR
AGENCY USE ONLY

- b. What kind and amount of vegetation will be removed or altered?

No vegetation would be removed or altered during 216-S-10 Pond and Ditch closure activities.

- c. List threatened or endangered species known to be on or near the site.

No known threatened or endangered species are known to be on or near the 216-S-10 Pond and Ditch. Additional information on species can be found in *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415 (Revision 17, September 2005).

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

None.

5. Animals

- a. Indicate (by underlining) any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: Raptors (burrowing owls, ferruginous, redtail, and Swainson's hawks) eagles, songbirds,
animals: deer, elk, coyotes, rabbits, rodents.

Additional information on animals can be found in *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415 (Revision 17, September 2005).

- b. List any threatened or endangered species known to be on or near the site.

One federal and state listed threatened or endangered species has been identified on the 1,517 square kilometer Hanford Site along the Columbia River (the bald eagle) and three in the Columbia River (steelhead, spring-run Chinook salmon, and bull trout). In addition, the state listed white pelican, sandhill crane, and ferruginous hawk also occur on or migrate through the Hanford Site.

TO BE COMPLETED BY APPLICANT

**EVALUATIONS FOR
AGENCY USE ONLY**

c. Is the site part of a migration route? If so, explain.

The Hanford Site is a part of the broad Pacific Flyway. However, the 216-S-10 Pond and Ditch location is not known as a haven for migratory birds.

d. Proposed measures to preserve or enhance wildlife, if any:

This project contains no specific measures to preserve or enhance wildlife.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

None.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

None.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.

Clean closure of the groundwater is not possible, due to potential chromium contamination. A post closure final status detection monitoring program is required.

1) Describe special emergency services that might be required.

No special emergency services are known to be required.

TO BE COMPLETED BY APPLICANT

**EVALUATIONS FOR
AGENCY USE ONLY**

2) Proposed measures to reduce or control environmental health hazards, if any:

Clean closure of the groundwater is not possible, due to chromium contamination in the groundwater. A post closure final status detection monitoring program is required.

b. Noise

1) What type of noise exists in the area which may affect your project (for example: traffic, equipment, operation, other)?

There could be a minor amount of traffic associated with post closure well monitoring operations.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Minor amounts of noise from traffic and equipment are expected for operation and maintenance of post-closure monitoring wells.

3) Proposed measures to reduce or control noise impacts, if any:

None.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

The 216-S-10 Pond and Ditch site is not in use. Adjacent properties are industrial/research.

b. Has the site been used for agriculture? If so, describe.

No portion of the 200 West Area has been used for agricultural purposes since 1943.

c. Describe any structures on the site.

There are no structures at the 216-S-10 Pond and Ditch site.

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR
AGENCY USE ONLY

d. Will any structures be demolished? If so, what?

Not applicable. There are no structures on the site (refer to Section B.8.c).

e. What is the current zoning classification of the site?

Does not apply. The site is located on Federal lands and as such is not subject to the Growth Management Act (State of Washington land use authority). However, for completeness, the Hanford Site is currently included in the Benton County Comprehensive Plan (June 22, 1998) as the undesignated "Hanford Sub-Area".

f. What is the current comprehensive plan designation of the site?

The Federal land management decision process has determined through NEPA [*Hanford Comprehensive Land-Use Plan Environmental Impact Statement Record of Decision* (64 FR 61615, November 12, 1999)] that the 200 West Area geographic area, designated Industrial-Exclusive. The 216-S-10 Ditch crosses the boundary, and the 216-S-10 Pond is outside of the boundary.

g. If applicable, what is the current shoreline master program designation of the site?

Does not apply.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No.

i. Approximately how many people would reside or work in the completed project?

Minimal staff would provide appropriate surveillance and maintenance of the post-closure wells after closure.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Does not apply.

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR
AGENCY USE ONLY

- 1
2 **I. Proposed measures to ensure the proposal is compatible with**
3 **existing and projected land uses and plans, if any:**

4 Does not apply (refer to Section B.8.f.).
5

6 **9. Housing**

- 7 **a. Approximately how many units would be provided, if any?**
8 **Indicate whether high, middle, or low-income housing.**

9 None.
10

- 11 **b. Approximately how many units, if any, would be eliminated?**
12 **Indicate whether high, middle, or low-income housing.**

13 None.
14

- 15 **c. Proposed measures to reduce or control housing impacts, if any:**

16 Does not apply.
17

18 **10. Aesthetics**

- 19 **a. What is the tallest height of any proposed structure(s), not**
20 **including antennas; what is the principal exterior building**
21 **material(s) proposed?**

22 No new structures are being proposed.
23

- 24 **b. What views in the immediate vicinity would be altered or**
25 **obstructed?**

26 None.
27

- 28 **c. Proposed measures to reduce or control aesthetic impacts, if**
29 **any:**

30 None.
31

32 **11. Light and Glare**

- 33 **a. What type of light or glare will the proposal produce? What**
34 **time of day would it mainly occur?**

35 None.
36

TO BE COMPLETED BY APPLICANT

**EVALUATIONS FOR
AGENCY USE ONLY**

- 1 b. Could light or glare from the finished project be a safety hazard
2 or interfere with views?

3 No.

- 4
5 c. What existing off-site sources of light or glare may affect your
6 proposal?

7 None.

- 8
9 d. Proposed measures to reduce or control light and glare impacts,
10 if any:

11 None.

12 **12. Recreation**

- 14 a. What designated and informal recreational opportunities are in
15 the immediate vicinity?

16 None.

- 17
18 b. Would the proposed project displace any existing recreational
19 uses? If so, describe.

20 No.

- 21
22 c. Proposed measures to reduce or control impacts on recreation,
23 including recreation opportunities to be provided by the project
24 or applicant, if any?

25 None.

26
27 **13. Historic and Cultural Preservation**

- 28 a. Are there any places or objects listed on, or proposed for,
29 national, state, or local preservation registers known to be on or
30 next to the site? If so, generally describe.

31 No places or objects listed on, or proposed for, national, state, or
32 local preservation registers are known to be on or next to the
33 216-S-10 Pond and Ditch.
34

TO BE COMPLETED BY APPLICANT

**EVALUATIONS FOR
AGENCY USE ONLY**

- 1 b. Generally describe any landmarks or evidence of historic,
2 archaeological, scientific, or cultural importance known to be on
3 or next to the site.

4 There are no known archaeological, historical, or Native American
5 religious sites on or near the 216-S-10 Pond and Ditch.
6

- 7 c. Proposed measures to reduce or control impacts, if any:

8 None.
9

10 **14. Transportation**

- 11 a. Identify public streets and highways serving the site, and
12 describe proposed access to the existing street system. Show on
13 site plans, if any.

14 Does not apply.
15

- 16 b. Is site currently served by public transit? If not, what is the
17 approximate distance to the nearest transit stop?

18 No. The distance to the nearest public transit stop is approximately
19 50 kilometers, located at Washington State University Tri-Cities.
20

- 21 c. How many parking spaces would the completed project have?
22 How many would the project eliminate?

23 Not applicable.
24

- 25 d. Will the proposal require any new roads or streets, or
26 improvements to existing roads or streets, not including
27 driveways? If so, generally describe (indicate whether public or
28 private).

29 No.
30

- 31 e. Will the project use (or occur in the immediate vicinity of)
32 water, rail, or air transportation? If so, generally describe.

33 No.
34

TO BE COMPLETED BY APPLICANT

**EVALUATIONS FOR
AGENCY USE ONLY**

- 1 f. How many vehicular trips per day would be generated by the
2 completed project? If known, indicate when peak volumes
3 would occur.

4 No additional vehicular traffic will be required. Groundwater
5 monitoring requirements will be coordinated with similar activities
6 supporting the 200-UP-1 groundwater operable unit.
7

- 8 g. Proposed measures to reduce or control transportation impacts,
9 if any:

10 None.
11

12 **15. Public Services**

- 13 a. Would the project result in an increased need for public services
14 (for example: fire protection, police protection, health care,
15 schools, other)? If so, generally describe.

16 No.
17

- 18 b. Proposed measures to reduce or control direct impacts on public
19 services, if any:

20 Does not apply.
21

22 **16. Utilities**

- 23 a. Circle utilities currently available at the site: electricity, natural
24 gas, water, refuse service, telephone, sanitary sewer, septic
25 system, other:

26 No utilities currently are available at the 216-S-10 Pond and Ditch.
27

- 28 b. Describe the utilities that are proposed for the project, the utility
29 providing the service, and the general construction activities on
30 the site or in the immediate vicinity which might be needed.

31 No utilities are proposed supporting closure of the 216-S-10 Pond
32 and Ditch.

1 **SIGNATURES**

2
3 The above answers are true and complete to the best of my knowledge. I understand that the lead agency
4 is relying on them to make its decision.
5

6
7
8 

9 

10 Keith A. Klein, Manager
11 U.S. Department of Energy
12 Richland Operations Office
13
14
15

Date